

# **LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES**



## **OFFICE OF FISHERIES INLAND FISHERIES SECTION**

### **PART VI -A**

## **WATERBODY MANAGEMENT PLAN SERIES**

### **BARTHOLOMEW LAKE**

## **LAKE HISTORY & MANAGEMENT ISSUES**

## **CHRONOLOGY**

DATE – October, 2011

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# LAKE HISTORY

## GENERAL INFORMATION

### Date reservoir formed

Construction of levees along Ouachita River and Bayou Bartholomew in 1930's.

### Impoundment

Owner – State of Louisiana.

Purposes for Creation – reservoir created when natural oxbow of Bayou Bartholomew was separated from active channel during construction of the Ouachita River levee system.

### Size

800 acres.

### Watershed

Approximately 4,120 acres, mostly agricultural, with some residential, and a small amount of forested area.

### Pool stage

71.0 ft. MSL

### Parish/s located

Ouachita and Morehouse: much of the centerline of the lake forms the boundary between the two parishes.

### Border waters

Bayou Bartholomew is adjacent to both ends of the lake and the north end of Bayou DeSiard is connected to Bartholomew Lake via a culvert with control structure near its mid-point lengthwise.

### Spillway width

6.5 feet section of 8 ft. x 8 ft. concrete drop box, 2 ft. lower than the open top of structure.

### Drawdown description

Structure – 30 inch culvert positioned at bottom of 8 ft. x 8ft. concrete drop box with slide gate operated manually by wheel. This culvert is attached to a 42" outflow pipe with flap gate on the Bayou Bartholomew side of levee. The structure is shown in Figure 1.

Number of culverts - 1

Condition – Good

Drawdown Capability – 8ft., Mean Sea Level (MSL) = 63ft..



Figure 1. Water control structure located at the southern end of Lake Bartholomew, LA, June, 2011.

Who controls

Tensas Basin Levee District owns and operates the structure.

LAKE AUTHORITY

Association

**Bayou DeSiard - Bayou Bartholomew Cutoff Loop Water Conservation Board** (membership as of May, 2011 listed in Table 1) – primary purpose is to establish, maintain, and protect a favorable water level in Bartholomew Lake and Bayou DeSiard and make available for all beneficial uses and purposes.

Table 1. Membership of the Bayou DeSiard-Bayou Bartholomew Cutoff Loop Water Conservation Board as of May, 2011.

Appointed By	Board Members	Address	Work Phone
Town of Sterlington -- OPPJ	Brown, John	251 Dixon Estate Road Sterlington, LA. 71280	(318)450-2878 (318)349-4302
MPPJ	Cain, Jerry	7411 West Lake Road Sterlington, LA. 71280	
City of Monroe Mayor Jamie Mayo	Vacant		
MPPJ	Gray, Jim Chairman	7833 East Lake Road Sterlington, LA. 71208	
OPPJ	Rabb, Morris	1531 Frenchman's Bend Rd. Monroe, LA. 71203	
	Stokes, David	6961 East Lake Road Sterlington, LA. 71208	

#### Authorization

Created by State statute in 1962 (See Appendix A).

#### Other Authority

City of Monroe – controls pumps at north end of lake used to fill Lake Bartholomew from Bayou Bartholomew, associated with Monroe city water usage.

Tensas Basin Levee District – owns and operates water control structure.

### ACCESS

Map with locations included in Appendix B.

#### Boat Ramps

Public – 1 public ramp located at north end of lake on Ouachita River Levee.

Description: 1 lane, concrete, no designated parking area

Coordinates: N 32°43.273'; W 92°02.331'.

Private – Barrett's (currently in disrepair).

Description: 1 lane, concrete, gravel parking lot, capacity = 15, \$2 fee.

Coordinates: N 32°42.140'; W 92°00.979'.

#### Piers

Private residential only.

#### State/Federal facilities

None

#### Fishing Structures

None

## SHORELINE DEVELOPMENT

### Residential

Approximately half of entire shoreline (mostly the south end) is in residential development.

### Business/Industry

None

### Agricultural

Cotton, corn, and soybeans are typically grown near the lake, with some fields irrigated from Lake Bartholomew.

## PHYSICAL DESCRIPTION OF LAKE

### Shoreline length

44 miles, narrow, winding, stream-like channel, avg. width = 120 ft.

### Timber type

Bald cypress *Taxodium distichum* common along shoreline and shallow areas, bottomland hardwood species abundant adjacent to shoreline.

### Average depth

14 ft.

### Maximum depth

25 ft.

### Natural seasonal water fluctuation

2 ft. – 4 ft.

## EVENTS/PROBLEMS

### Implementation and Removal of Largemouth Bass Slot Limit

A 14 in. – 17 in. protective slot limit for largemouth bass was established as per implementation of the Louisiana Black Bass Management Plan (1990), in 1991. The Plan designated Lake Bartholomew as one of seven “quality” lakes in the state. A “quality” lake is defined as meeting the criteria proven to be associated with the occurrence of increased numbers of largemouth bass greater than 25 inches and/or 10 lbs., but differs in population characteristics of those designated as trophy lakes, which are managed with a 15 in. – 19 in. slot limit. The slot limit was removed in January, 2000 after no significant increase in larger bass was observed through sampling nor reported by anglers.

### Additional Water Supply for the City of Monroe

Lake Bartholomew is a reserve water supply for the City of Monroe. Bayou DeSiard, the



primary water supply for Monroe, can also be refilled with water from Lake Bartholomew. Water is pumped from Bayou Bartholomew into Lake Bartholomew, where the water can be released through a culvert directly into Bayou DeSiard. Being a reserve water supply may limit drawdown options and places restrictions on water usage. If Lake Bartholomew were drawn down significantly, the immediate refilling of Bayou DeSiard by pumping would not be possible.

#### Water Level Controversy of 2010

In early 2010, a few homeowners along Lake Bartholomew brought to the attention of the Bayou DeSiard-Bartholomew Cutoff Loop Board and LDWF that they believed the staff gage used for recording water level was incorrect and the lake was not being maintained at the correct MSL. Collaborations between the City of Monroe and DOTD led to the finding that the gage was reading 1 ft. and 1 inch lower than the correct level. It was unknown how long the staff gage had been incorrectly set. This led to the calibration and relocation of a new staff gage to the southwest corner of the bridge crossing.

## **MANAGEMENT ISSUES**

### **AQUATIC VEGETATION**

There have been periodic problems with nuisance aquatic plant species. Most of the problems have been with the floating species duckweed, *Lemna sp.* and water hyacinth, *Eichhornia crassipes*. Hydrilla, *Hydrilla verticillata*, a non-native submerged species, was first detected in 2004 near Barrett's boat ramp. Location of the infestation (spring 2011) is shown in Figure 2. One herbicide treatment was made in 2010 to control its expansion (see Treatment History below). The steep drop-offs in much of the lake limit submerged species to areas adjacent to the shoreline and in shallow areas less than 5 ft. deep. Alligatorweed, *Alternanthera philoxeroides* and water primrose, *Ludwigia uruguayensis* are found in shallow areas around the shoreline. Native submerged species such as coontail, *Ceratophyllum demersum* and southern naiad, *Najas guadalupensis* are also common in the shallows and are currently at beneficial amounts.



Figure 2. Coverage of hydrilla in Lake Bartholomew, LA in the spring 2011.

#### Type Map

Hughes and Walker 1972 (LDWF) August Condition Report of Bartholomew Lake: reported most serious infestations were of alligatorweed and filamentous algae, *Chara sp.* Other species documented include: duckweed, watermeal, *Wolffia sp.*, coontail, fanwort, *Cabomba caroliniana*, and water hyacinth.

LDWF Type Map of 2006 (Appendix B).

### Biomass

None performed.

### Treatment History by Year

#### Biological

None

#### Mechanical

None

#### Chemical

Routine spraying of contact herbicides for control of floating and emergent species has been performed by LDWF spray crews since the 1960's. Species most commonly treated include: alligator weed, duckweed, and water hyacinth. Diquat, glyphosate, and 2, 4-D has been the most commonly used herbicides.

2010 Hydrilla Treatment - In August, 2010, a 12 acre infestation of hydrilla (Figure 2) was treated with Aquathol Super K (granular endothall) at a concentration of 3.5 ppm. This treatment temporarily reduced the coverage of hydrilla, although expansion of the infestation was documented in spring 2011. Treating late in the growing season may have contributed to the ineffectiveness of this treatment.

2011 Hydrilla Treatment – Approximately half of the current 14 acre hydrilla infestation was treated in April, 2011 with Aquathol Super K at a concentration of 4.0 ppm. This treatment was performed on the western shoreline of the infested area, since there is no residential irrigation in this area. An evaluation has not yet been performed. A planned treatment of the eastern shoreline with a surface and subsurface application of Cutrine Plus algaecide (chelated copper) mixed with Knockout (diquat dibromide) is currently being coordinated.

## HISTORY OF REGULATIONS

### Recreational

#### Black Bass (Largemouth or Spotted)

State Regulations have always been in effect with the exception of a slot limit imposed from April 1, 1991 – January 20, 2000. Currently: 10 fish daily creel, no size limit.

April 1, 1991 – January 2000: 14" – 17" slot limit in effect for black bass. Daily creel limit was 8 fish, with no more than 4 bass over the slot allowed. The slot limit was removed due to lack of significant increase of larger "trophy" size bass in the population.

Crappie (Black or White)  
50 fish creel, no size limit.

#### Other Species

Buffalofish or their hybrids: 16" min. length, 25 per day under 16"  
Freshwater Drum (Gaspergou): 12" min. length, 25 per day under 12"  
Bowfin (Choupique, Grinnell): 16" min. length  
Channel Catfish: 11" min. length (see Catfish below for possession limit)  
Blue Catfish: 12" min. length (see Catfish below for possession limit)  
Flathead Catfish: 14" min. length (see Catfish below for possession limit)  
Catfish (Blue, Channel, and Flathead): possession limit caught on a recreational license shall be 100. The 100 fish may be a single species or a combination of the above 3. In addition, an angler may possess a maximum of 25 undersize catfish of a single or combination of all 3 species.  
White Bass: 50 daily  
Yellow Bass: 50 daily  
Other Freshwater Gamefish: No Limit

#### Commercial

Commercial fish netting is prohibited. Effective September 20, 1991, gill nets, trammel nets, hoop nets, and fish seines were prohibited by legislative statute in conjunction with the implementation of a slot limit for black bass in April, 1991.

#### DRAWDOWN HISTORY

No significant drawdowns of Lake Bartholomew have been documented. Conversation with board members, residents, and Tensas Basin Levee District personnel has led to the conclusion that only occasional drawdowns of 2 ft. or less have ever been performed. Past drawdowns may have not involved LDWF and taken place directly between the Board and Tensas Levee District. A 5 ft. fall/winter drawdown was approved by LDWF in 1997 for dock repair and hyacinth control. Actual reduction in lake elevation did not exceed 2 feet according to witnesses. Another request was made in 1998 for a 4 ft. fall/winter drawdown for dock repair, but also did not exceed 2 ft. A drawdown was proposed by the Board in 2009 and agreed upon by LDWF, but it did not occur due to heavy rainfall. The 30 inch culvert is most likely a limiting factor, in that it has inadequate flow capacity.

#### FISH KILLS/ DISEASE HISTORY/ LMBV

There have been no reports of fish kills or disease from Lake Bartholomew.

#### CONTAMINANTS/ POLLUTION

There has not been a fish consumption advisory issued for Lake Bartholomew by either Louisiana Department of Environmental Quality (LDEQ) or Louisiana Department of Health and Hospitals (LDHH). Advisories have been listed for the nearby Ouachita River and Bayou Bartholomew, which is used as a surface water source for Lake Bartholomew. Bayou Bartholomew is currently listed as impaired by the EPA because of elevated methyl mercury concentrations. Water quality concerns noted for the Bayou Bartholomew watershed and the related US Environmental Protection Agency Data are available from the following:

[http://iaspub.epa.gov/tmdl\\_waters10/huc\\_rept.control?p\\_huc=08040205&p\\_huc\\_desc=BAYOU BARTHOLOMEW](http://iaspub.epa.gov/tmdl_waters10/huc_rept.control?p_huc=08040205&p_huc_desc=BAYOU BARTHOLOMEW)

<http://www.deq.louisiana.gov/apps/305db/show2.asp?WBID=LA080401>

There has been no history of contaminant or pollution problems in Lake Bartholomew. LDEQ conducts routine water quality sampling on Bayou Bartholomew and Bayou DeSiard, but none on Lake Bartholomew.

## BIOLOGICAL

### Fish samples

History – Standardized sampling (as per LDWF guidelines) was initiated in 1990, while rotenone sampling was conducted from 1968 through 1992.

Gear- Table 2 below summarizes past and future sampling.

Table 2. Summary of past and scheduled sampling for Lake Bartholomew.

<b>BARTHOLOMEW LAKE SAMPLING</b>	
Note: All sampling conducted as per LDWF Standardized Sampling Guidelines.	
1968 - 1987	Rotenone Sampling Only; conducted in the following years: 1968, 1969, 1972, 1975, 1976, 1978, 1979, and 1987. <i>A rotenone sample consists of a 1 acre area blocked off with a net and the fish toxicant rotenone applied throughout, and fish collected for an hour after initial application and again the following morning.</i>
1990	<p>Electrofishing: (8)15 minute samples in fall and (1) 15 minute sample in spring. <i>Note: electrofishing samples are defined as 900 seconds of time that electrical current is actually being applied into the water. In addition, other parameters such as sampling equipment, time of day, time of year and sample site are all consistent.</i></p> <p>Gill Nets: 3 samples in winter. <i>Note: a gill net sample consists of 4 gill nets of the following mesh sizes fished simultaneously in the same area: 2.5", 3.0", 3.5", and 4.0". Nets fished overnight for approximately 24 hrs.</i></p> <p>Shoreline Seining: 5 samples during spring and summer. <i>Note: a seine sample is defined as a minimum of a 1 quadrant of a circle haul at each location.</i></p>

1991	<p>Electrofishing: (4)15 minute samples in spring and (8) 15 minute samples in fall</p> <p>Gill Nets: 3 samples in winter</p> <p>Rotenone: 2 samples in summer</p> <p>Shoreline Seining: 6 samples in spring and summer</p>
1992	<p>Electrofishing: (6)15 minute samples in spring and fall</p> <p>Recreational Angler Creel Survey: 6 surveys/month, 12 months <i>Note: A recreational angler creel survey consists of acquiring information from anglers concerning their fishing trip, including measuring harvested fish. The survey is conducted at a selected boat ramp, with duration being 5 hours.</i></p> <p>Rotenone: 2 samples in summer</p>
1993	<p>Electrofishing: (6)15 minute samples spring and (4) 15 minute samples in fall</p> <p>Gill Nets: 3 samples during winter *4.0" nets not fished</p>
1994	Electrofishing: (6)15 minute samples in spring and fall
1995	<p>Electrofishing: (6) 15 minute samples in spring and fall</p> <p>Recreational Angler Creel Survey: 6 surveys/month, 12 months</p> <p>Rotenone: 2 samples during summer</p>
1996	<p>Electrofishing: (6) 15 minute samples spring and fall</p> <p>Gill Nets: 2 samples during winter</p>
1997	<p>Electrofishing: (6) 15 minute samples in spring and (9) 15 minute samples in fall</p> <p>Gill Nets: 2 samples during winter</p>
1998	<p>Electrofishing: (6) 15 minute samples in spring and (7) 15 minute samples in fall</p> <p>Gill Nets: 3 samples during winter</p>
1999	Electrofishing: (6) 15 minute samples in spring and (7) 15 minute samples in fall - Largemouth Bass Age and Growth
2000	Gill Nets: 3 samples during winter
2001	<p>Electrofishing: (6) 15 minute samples in spring and (6) 15 minute samples in fall - Largemouth Bass Age and Growth, Genetics</p> <p>Gill Nets: 3 samples during winter</p>
2004	<p>Electrofishing: (6) 15 minute samples in spring and (6) 15 minute samples in fall - Largemouth Bass Age and Growth, Genetics</p> <p>Shoreline Seining: 3 samples in summer</p>

2005	Gill Nets: 3 samples during winter
2006	Aquatic Type Map
2007	Electrofishing: (6) 15 minute samples in spring and (6) 15 minute samples in fall - Largemouth Bass Age and Growth
2008	Gill Nets: 4 samples during winter
2010	Electrofishing: (4) 15 minute samples in spring and (5) 15 minute samples in fall - Largemouth Bass Age and Growth
2012	Gill Nets: 3 samples during winter Aquatic Type Map
2013	Electrofishing: (6) 15 minute samples in spring and (6) 15 minute samples in fall Lead Net Sampling in fall
2015	Gill Nets: 3 samples during winter

#### Lake records

No records are kept.

#### Stocking History

The following list in Table 3 is of the fish stockings in Lake Bartholomew from 1974 through the present. Hybrid striped bass (HSB) and Florida largemouth bass (FLMB) have been the most commonly stocked fish. No fish have been stocked since 1999.

Table 3. History of fish stockings in Lake Bartholomew, LA from 1974 – present.

<u>Date</u>	<u>Species</u>	<u>Size</u>	<u>Number</u>	<u>Notes</u>
1974	northern largemouth	unknown	11,845	
1976	hybrid striped bass	unknown	10,202	
1977	hybrid striped bass	unknown	14,250	
1977	blue and channel catfish	unknown	8,000	
1978	hybrid striped bass	unknown	10,530	
1978	blue and channel catfish	unknown	1,000	
1979	blue catfish	unknown	10,000	
1979	hybrid striped bass	unknown	14,956	
1980 - 1990	hybrid striped bass	unknown	105,479	avg. 9,600 stocked annually
1990	flathead catfish	unknown	4,667	
1991	Florida largemouth bass	unknown	99,003	
1992	Florida largemouth bass	unknown	81,287	
Jan. 1993	Florida largemouth bass	fingerlings	41,813	
March 1994	Florida largemouth bass	1 year old	326	
May 1994	Florida largemouth bass	fingerlings	5,716	
May 1994	Florida largemouth bass	fingerlings	1,203	
May 1994	Florida largemouth bass	fingerlings	2,467	
May 1994	Florida largemouth bass	sac fry	40,902	
April 1995	Florida largemouth bass	adv. fry	89,402	

May 1996	Florida largemouth bass	fingerlings	50,225	
June 1996	Florida largemouth bass	fingerlings	8,142	
June 1998	Florida largemouth bass	fingerlings	22,000	
June 1999	alligator gar	fingerlings	10,000	

### **Scheduled Fish Stockings**

**-Hybrid Striped Bass-** The stocking of hybrid striped bass was discontinued in 1991 due to a declining popularity among anglers. No requests have been made for them to be stocked again for angling purposes.

**-Largemouth Bass-** The stocking of Florida largemouth bass into Lake Bartholomew was initiated in 1991 and discontinued after 1998. The stockings were in an effort to quickly increase the presence of the Florida gene in the population and were made in conjunction with the implementation of a 14” – 17” slot limit to promote a trophy fishery for largemouth bass.

**-Alligator Gar –** This single stocking in 1999 was considered to be experimental. A residual population had existed for many years previous in Lake Bartholomew, and when fingerlings became available from USFWS, a trial stocking was made to evaluate stocking success and possibly restore a population in the lake. Success of this stocking is still unknown.

**-Catfish-** Blue, channel, and flathead catfish have been stocked occasionally, primarily for the purpose of shad and forage control, but also to increase species diversity and satisfy angler requests.

**-Other Species –**Self-sustaining populations of other recreational species in Lake Bartholomew negate the need for any supplemental stockings. No current evidence indicates a need for additional species or stockings.

### **Species profile**

A post impoundment list of fishes sampled in Lake Bartholomew is found in Appendix C.

### **Genetics**

Only the Florida largemouth bass has been stocked into Lake Bartholomew, with the exception of a single stocking of northern largemouth bass in 1972. Florida bass are typically stocked into waterbodies in which they are believed to have the potential to grow to a large size and produce quality size bass. Stocking was initiated in 1991 and discontinued after 1998. No genetic analysis was performed before this period, but it was assumed that the population was comprised of only northern largemouth bass. A genetic sample taken in 1991 did not reveal the presence of the Florida bass in the population.



Genetic samples taken during the slot limit years in 1994 and 1997 showed an increasing percentage of Florida genetics with 18% and 33% respectively containing the Florida genes. The slot limit for bass was removed in 2000, and thus the effort to produce a quality bass fishery by stocking Florida bass along with a special harvest regulation was discontinued. Genetic analyses of largemouth bass have been conducted since then, in 2001 and 2004. Both samples revealed the Florida gene to be present in 25% of the fish with pure Florida bass comprising 3% and hybrids (Florida x northern) comprising 22% in both samples.

#### Threatened/endangered/exotic species

No fish species sampled.

#### CREEL

The objective of a creel survey is to determine a relative index of fishing pressure, catch, harvest, success, and preferred species fished for. The following creel surveys were initiated primarily to obtain information about angler harvest of largemouth bass to better evaluate the effectiveness of the recently implemented slot limit on bass.

#### Historic Information/Type

**1992 Recreational Angler Survey** - This creel survey was an access point survey designed to provide monthly estimates of total catch, harvest, length frequency of the harvest, and release by species. Surveys were performed 6 days a month, 12 months a year, at a designated boat ramp. Dates and ramps were selected randomly, with 4 of the days per month being on weekends. All anglers completing a fishing trip were interviewed over a 5 hour period in either the morning or evening. Anglers were asked what species they fished for, how long they fished, how many they caught, how many they kept, and how far they drove. Ten fish of each species were randomly selected from each creel to measure for total length.

**1995 Recreational Angler Survey** – same as in 1992

#### HYDROLOGICAL CHANGES

Lake Bartholomew has undergone numerous hydrological changes over the last century. These changes include the following:

1. Impoundment of active oxbow of Bayou Bartholomew during the construction of the Ouachita River levee system in the 1930's. This resulted in permanent separation from Bayou Bartholomew and the Ouachita River and minimal water level fluctuation within the impoundment.
2. A culvert with a control structure was placed underneath an earthen dam that separated Lake Bartholomew from Bayou DeSiard during construction of U.S. Hwy. 165 in the 1960's. This structure physically isolated the two waterbodies, though

- water can be released through the culvert into Bayou DeSiard.
3. Two high capacity electric pumps were placed in Bayou Bartholomew in the 1960's for filling the lake. This was done so that water may be diverted into Bayou DeSiard for use as the City of Monroe's primary drinking water supply. This has resulted in Lake Bartholomew being maintained near pool stage throughout the year so that water levels in Bayou DeSiard will not become critically low, especially during drought conditions.
  4. Agricultural irrigation from Lake Bartholomew has decreased due to increases in residential development around the lake. Residential irrigation is common, though does not significantly impact water levels.
  5. Siltation has declined due to reduction in agricultural activities surrounding the lake.

## WATER USE

### Municipal Water Supply

Lake Bartholomew serves as an integral water source for Bayou DeSiard, which is the primary water supply for the City of Monroe. Water may be released from Lake Bartholomew into Bayou DeSiard via a culvert for refilling purposes when water levels become low. Lake Bartholomew may be refilled by pumping from Bayou Bartholomew.

### Recreational:

1. Fishing - Open to public.
2. Skiing – Not restricted, but not suitable due to obstructions (stumps, etc)
3. Scuba Diving - Not suitable (murky water).
4. Swimming - No public swimming area.
5. Hunting - Not permitted.

### Irrigation

A total of 5 agricultural pumps have been identified recently along the shoreline of Lake Bartholomew for the purpose of crop irrigation. It was not clear whether all of these were operational. Residential irrigation of lawns is commonly performed throughout the growing season.

# ***APPENDIX A.***

## LOUISIANA REVISED STATUTES

### TITLE 38. PUBLIC CONTRACTS, WORKS AND IMPROVEMENTS

#### PART VI. BAYOU DESIARD-BAYOU BARTHOLOMEW CUT-OFF LOOP WATER CONSERVATION BOARD

##### §2751. Creation

There is hereby created a water conservation board to be known as the Bayou DeSiard-Bayou Bartholomew Cut-Off Loop Water Conservation Board of Ouachita and Morehouse Parishes, Louisiana.

Added by Acts 1962, No. 308, §1.

##### §2752. Board as political agency; purpose

The board shall be a political agency of the state of Louisiana and, subject to the limitations and restrictions set out in this Part, shall have authority to establish, maintain and protect a favorable level of fresh water in Bayou DeSiard and Bayou Bartholomew Cut-Off Loop in Townships 18, 19 and 20 North, Ranges 3 and 4 East, in the Parishes of Ouachita and Morehouse, state of Louisiana, to be available for all beneficial uses and purposes.

Added by Acts 1962, No. 308, §2.

##### §2753. Powers

The board shall have the power to sue and be sued; to buy and sell; to exercise the right of expropriation; to own, maintain and operate property, both movable and immovable, to acquire servitudes, rights of way and flowage rights, to negotiate and execute contracts; to cooperate with the state of Louisiana or any agency or political subdivision thereof or with the government of the United States or any department or agency thereof on any basis that the board shall deem advisable for the joint or separate construction, ownership, operation and maintenance of pump facilities, pipelines, flood gauges, water conveyors and other devices, equipment and property; to accept gifts or contributions of any nature from the state of Louisiana or the United States or any agency or political subdivision thereof; and to make and collect reasonable charges or fees for its services in connection with the water made available by any facilities provided by said board; provided, no charges shall be assessed against any municipality or other political subdivision, and that in exercising the powers and authority aforesaid, the board shall cooperate with, and shall act under the supervision and control of, the Louisiana Department of Public Works.

Added by Acts 1962, No. 308, §3.

##### §2754. Restrictions

The board shall not build any dam, sill or other restrictive structure of any kind which will reverse or otherwise materially affect the natural flow of Bayou Bartholomew; the board shall, however, be empowered to remove water from Bayou Bartholomew at any time when suitable water is available. The board shall not have authority to destroy or substantially

diminish prior or vested water rights or uses.

Added by Acts 1962, No. 308, §4. Amended by Acts 1974, No. 136, §1.

§2755. Membership

The board shall consist of six members who shall be appointed by the governing authorities of Ouachita and Morehouse Parishes for a term of four years and until their successors have been named and qualified, as follows:

One member shall be appointed from a list of three names submitted to the police jury of Ouachita Parish by the Monroe Utilities Commission; one member to be appointed from a list of three names submitted to the Ouachita Parish Police Jury by the town council of the municipality of Sterlington, such persons to be legal residents of the municipality of Sterlington; one member to be appointed by the police jury on its own motion; one member to be appointed from a list of three names submitted to the police jury of Morehouse Parish by the mayor and board of aldermen of the city of Bastrop, Louisiana; one member to be appointed from a list of three names submitted to the police jury of Morehouse Parish by the Bastrop Association of Commerce and Industry; and a sixth member from Morehouse Parish to be appointed by the police jury of Morehouse Parish on its own motion.

Added by Acts 1962, No. 308, §5. Amended by Acts 1966, No. 448, §5.

§2756. Officers; meetings; quorum

The board shall elect from its own membership a chairman, a secretary and a treasurer. Four members of said board shall constitute a quorum for the transaction of business and the meetings of the Board shall be held at such time and place as shall be fixed at the call of the chairman after due notice to the full membership.

Added by Acts 1962, No. 308, 6.

§2757. Compensation; expenses

The membership of said board shall serve without compensation for its services to the board, but it shall be entitled to reimbursement for actual expenses incurred in the performance of its duties.

Added by Acts 1962, No. 308, §7.

## APPENDIX B. 2006 Type Map

### Bartholomew Lake Type Map Summary of Vegetation Survey Conducted 8/8/06 – M. Wood, R. Lively

#### STERLINGTON END

Very light vegetation observed in the 5.7 mile stretch from bridge (32° 41' 11.5" N // 92° 02' 49.9W) to lower end (32° 43' 6.4" N // 92° 03' 21.2W). Small patches of primrose and water hyacinth present with filamentous algae fringe on both sides for last 0.75 mile to end (Figure 3). Vegetation coverage estimated at < 2%.

#### PERRYVILLE END

Fringe of primrose and water hyacinth and filamentous algae light and limited to North bank at bridge, but becomes gradually heavier and is present on both banks at Barrett's Ramp. From Barrett's Ramp to Public Ramp (32° 43' 15.3" N // 92° 02' 15.9W) water hyacinth becomes dominant.

From Barrett's Ramp back towards the bridge, a 3.7 mile fringe of coontail and Hydrilla has developed. A small patch of Hydrilla was observed and removed adjacent to Barrett's Ramp in fall, 2004. Current coverage is apparently one of expansion with patches of Hydrilla mixed with coontail. Vegetation coverage estimated at approximately 5%, primarily consisting of emergent species. Total vegetation coverage estimated at < 5% surface area of the waterbody.

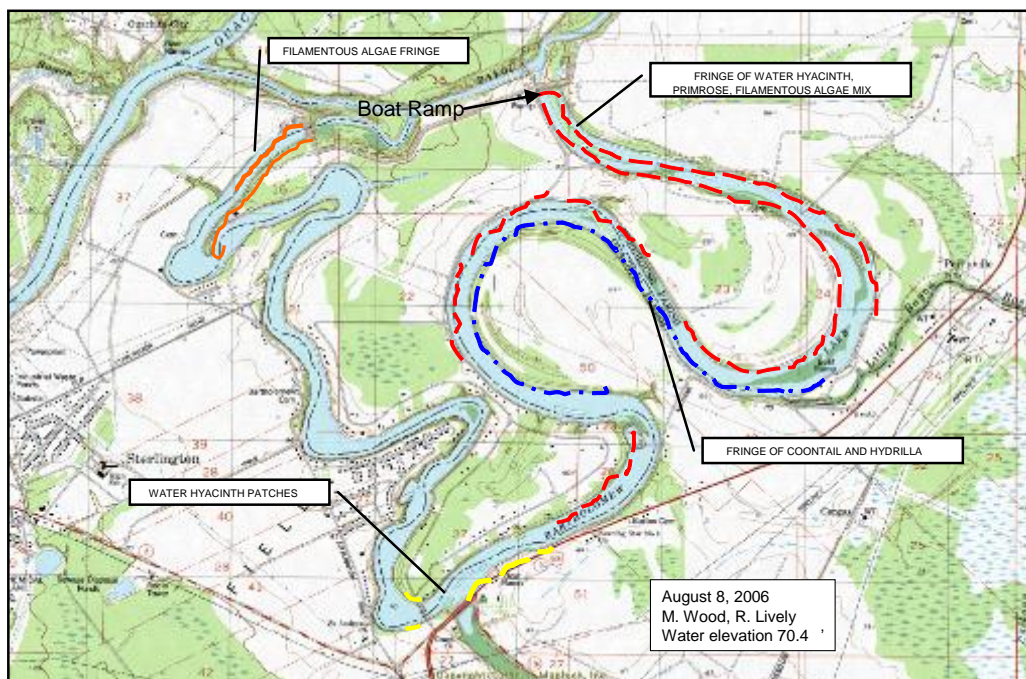


Figure 3. Lake Bartholomew, LA vegetation coverage as reported from 2006 type map survey.

## ***APPENDIX C. Fish Species Documented in Lake Bartholomew***

### AMIIDAE (Bowfin Family)

Bowfin, *Amia calva* (Linnaeus)

### ATHERINIDAE (Siverside Family)

Brook Silverside, *Labidesthes sicculus* (Cope)

### CATOSTOMIDAE (Sucker Family)

Bigmouth Buffalo, *Ictiobus cyprinellus* (Valenciennes)

Black Buffalo, *Ictiobus niger* (Rafinesque)

Smallmouth Buffalo, *Ictiobus bubalus* (Rafinesque)

Spotted Sucker, *Minytrema melanops* (Rafinesque)

### CENTRARCHIDAE (Sunfish Family)

Bluegill, *Lepomis macrochirus* (Rafinesque)

Black Crappie, *Pomoxis nigromaculatus* (Lesueur)

White Crappie, *Pomoxis annularis* (Rafinesque)

Largemouth Bass, *Micropterus salmoides* (Lacepede)

Dollar Sunfish, *Lepomis marginatus* (Holbrook)

Redear Sunfish, *Lepomis microlophus* (Gunther)

Green Sunfish, *Lepomis cyanellus* (Rafinesque)

Longear Sunfish, *Lepomis megalotis* (Rafinesque)

Warmouth, *Lepomis gulosus* (Cuvier)

### CLUPEIDAE (Herring Family)

Gizzard Shad, *Dorosoma cepedianum* (Lesueur)

Threadfin Shad, *Dorosoma petenense* (Gunther)

### CYPRINIDAE (Minnow Family)

Common Carp, *Cyprinus carpio* (Linnaeus)

Golden Shiner, *Notemigonus crysoleucas* (Mitchell)

Bullhead Minnow, *Pimephales vigilax* (Baird and Girard)

Blacktail Shiner, *Cyprinella venusta* (Girard)

Pallid Shiner, *Notropis amnis* (Hubbs and Greene)

Taillight Shiner, *Notropis maculatus* (Hay)

### FUNDULIDAE (Topminnow Family)

Golden Topminnow, *Fundulus chrysotus* (Gunther)

Blackstripe Topminnow, *Fundulus notatus* (Rafinesque)

Blackspotted Topminnow, *Fundulus olivaceus* (Storer)

Southern Starhead Topminnow, *Fundulus nottii* (Agassiz)

## App. C cont'd.

### ICTALURIDAE (Freshwater Catfish Family)

Yellow Bullhead, *Ameiurus natalis* (Lesueur)  
Black Bullhead, *Ameiurus melas* (Rafinesque)  
Brown Bullhead, *Ameiurus nebulosus* (Lesueur)  
Channel Catfish, *Ictalurus punctatus* (Rafinesque)  
Blue Catfish, *Ictalurus furcatus* (Rafinesque)  
Flathead Catfish, *Pylodictis olivaris* (Rafinesque)

### LEPISOSTEIDAE (Gar Family)

Alligator Gar, *Atractosteus spatula* (Lacepede)  
Spotted Gar, *Lepisosteus oculatus* (Winchell)  
Longnose Gar, *Lepisosteus osseus* (Linnaeus)

### POECILIIDAE (Livebearer Family)

Mosquitofish, *Gambusia affinis* (Baird and Girard)

### MORONIDAE (Temperate Bass Family)

White Bass, *Morone chrysops* (Rafinesque)  
Yellow Bass, *Morone mississippiensis* (Jordan and Eigenmann)  
Hybrid Striped Bass *Morone chrysops* x *Morone saxatilis*

### PERCIDAE (Darter and Perch Family)

Cypress Darter, *Etheostoma proeliare* (Hay)

### SCIAENIDAE (Drum Family)

Freshwater Drum, *Aplodinotus grunniens* (Rafinesque)